



## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 60

[EPA-HQ-OAR-2021-0664; FRL-8511-01-OAR]

RIN 2060-AV30

### Review of Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations

**AGENCY:** Environmental Protection Agency (EPA)

**ACTION:** Proposed rule.

**SUMMARY:** This proposal presents the preliminary results of the Environmental Protection Agency's (EPA's) review of the New Source Performance Standards (NSPS) for Automobile and Light Duty Truck Surface Coating Operations as required by the Clean Air Act (CAA). The EPA is proposing, in a new NSPS subpart, revised volatile organic compound (VOC) emission limits for prime coat, guide coat, and topcoat operations for affected facilities that commence construction, modification or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. In addition, the EPA is proposing amendments under the new NSPS subpart: revision of the plastic parts provision; updates to the control devices and control device testing and monitoring requirements; revision of the transfer efficiency provisions; revision of the recordkeeping and reporting requirements, the addition of work practices to minimize VOC emissions; the addition of electronic reporting; clarification of the requirements for periods of startup, shutdown and malfunction; and other amendments to harmonize the new NSPS subpart and Automobile and Light Duty Truck Surface Coating National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements. The EPA is also proposing to amend NSPS subpart MM to apply to sources that commence construction, reconstruction, or modification after October 5, 1979, and on or before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and to add electronic reporting requirements.

**DATES:** Comments must be received on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

*Public hearing:* If anyone contacts us requesting a public hearing on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, we will hold a virtual public hearing. See **SUPPLEMENTARY INFORMATION** for information on requesting and registering for a public hearing.

**ADDRESSES:** You may send comments, identified by Docket ID No. EPA-HQ-OAR-2021-0664, by any of the following methods:

- Federal eRulemaking Portal: <https://www.regulations.gov/> (our preferred method).  
Follow the online instructions for submitting comments.
- Email: [a-and-r-docket@epa.gov](mailto:a-and-r-docket@epa.gov). Include Docket ID No. EPA-HQ-OAR-2021-0664 in the subject line of the message.
- Fax: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2021-0664.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA-HQ-OAR-2021-0664, Mail Code 28221T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.
- Hand/Courier Delivery: EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. The Docket Center's hours of operation are 8:30 a.m. – 4:30 p.m., Monday – Friday (except federal holidays).

*Instructions:* All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to <https://www.regulations.gov/>, including any personal information provided. For detailed instructions on sending comments and

additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document. Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room are open to the public by appointment only to reduce the risk of transmitting COVID-19. Our Docket Center staff also continue to provide remote customer service via email, phone, and webform. Hand deliveries and couriers may be received by scheduled appointment only. For further information on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

**FOR FURTHER INFORMATION CONTACT:** For questions about this proposed action, contact Ms. Paula Deselich Hirtz, Minerals and Manufacturing Group, Sector Policies and Programs Division (D243-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-2618; fax number: (919) 541-4991; and email address: [hirtz.paula@epa.gov](mailto:hirtz.paula@epa.gov).

**SUPPLEMENTARY INFORMATION:**

*Participation in virtual public hearing.* Please note that because of current Centers for Disease Control and Prevention (CDC) recommendations, as well as state and local orders for social distancing to limit the spread of COVID-19, the EPA cannot hold in-person public meetings at this time.

To request a virtual public hearing, contact the public hearing team at (888) 372-8699 or by email at [SPPDpublichearing@epa.gov](mailto:SPPDpublichearing@epa.gov). If requested, the virtual hearing will be held on **[INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The hearing will convene at 9:00 a.m. Eastern Time (ET) and will conclude at 3:00 p.m. ET. The EPA may close a session 15 minutes after the last pre-registered speaker has testified if there are no additional speakers. The EPA will announce further details at <https://www.epa.gov/stationary-sources-air-pollution/automobile-and-light-duty-truck-surface-coating-operations-new>.

If a public hearing is requested, the EPA will begin pre-registering speakers for the hearing no later than 1 business day after a request has been received. To register to speak at the virtual hearing, please use the online registration form available at <https://www.epa.gov/stationary-sources-air-pollution/automobile-and-light-duty-truck-surface-coating-operations-new> or contact the public hearing team at (888) 372-8699 or by email at [SPPDpublichearing@epa.gov](mailto:SPPDpublichearing@epa.gov). The last day to pre-register to speak at the hearing will be **[INSERT DATE 12 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Prior to the hearing, the EPA will post a general agenda that will list pre-registered speakers in approximate order at: <https://www.epa.gov/stationary-sources-air-pollution/automobile-and-light-duty-truck-surface-coating-operations-new>.

The EPA will make every effort to follow the schedule as closely as possible on the day of the hearing; however, please plan for the hearings to run either ahead of schedule or behind schedule.

Each commenter will have 5 minutes to provide oral testimony. The EPA encourages commenters to provide the EPA with a copy of their oral testimony electronically (via email) by emailing it to [hirtz.paula@epa.gov](mailto:hirtz.paula@epa.gov). The EPA also recommends submitting the text of your oral testimony as written comments to the rulemaking docket.

The EPA may ask clarifying questions during the oral presentations but will not respond to the presentations at that time. Written statements and supporting information submitted during the comment period will be considered with the same weight as oral testimony and supporting information presented at the public hearing.

Please note that any updates made to any aspect of the hearing will be posted online at <https://www.epa.gov/stationary-sources-air-pollution/automobile-and-light-duty-truck-surface-coating-operations-new>. While the EPA expects the hearing to go forward as set forth above, please monitor our website or contact the public hearing team at (888) 372-8699 or by email at

*SPPDpublichearing@epa.gov* to determine if there are any updates. The EPA does not intend to publish a document in the *Federal Register* announcing updates.

If you require the services of a translator or a special accommodation such as audio description, please pre-register for the hearing with the public hearing team and describe your needs by **[INSERT DATE 7 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The EPA may not be able to arrange accommodations without advanced notice.

*Docket.* The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2021-0664. All documents in the docket are listed in <https://www.regulations.gov/>. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy. With the exception of such material, publicly available docket materials are available electronically in Regulations.gov.

*Instructions.* Direct your comments to Docket ID No. EPA-HQ-OAR-2021-0664. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <https://www.regulations.gov/>, including any personal information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit electronically to <https://www.regulations.gov/> any information that you consider to be CBI or other information whose disclosure is restricted by statute. This type of information should be submitted as discussed below.

The EPA may publish any comment received to its public docket. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the Web, cloud, or other file sharing system). For additional

submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

The <https://www.regulations.gov/> website allows you to submit your comment anonymously, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through <https://www.regulations.gov/>, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any digital storage media you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should not include special characters or any form of encryption and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at <https://www.epa.gov/dockets>.

Due to public health concerns related to COVID-19, the Docket Center and Reading Room are open to the public by appointment only. Our Docket Center staff also continues to provide remote customer service via email, phone, and webform. Hand deliveries or couriers will be received by scheduled appointment only. For further information and updates on EPA Docket Center services, please visit us online at <https://www.epa.gov/dockets>.

The EPA continues to carefully and continuously monitor information from the CDC, local area health departments, and our federal partners so that we can respond rapidly as conditions change regarding COVID-19.

*Submitting CBI.* Do not submit information containing CBI to the EPA through <https://www.regulations.gov/>. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on any digital storage media that you mail to the EPA, note the docket

ID, mark the outside of the digital storage media as CBI, and identify electronically within the digital storage media the specific information that is claimed as CBI. In addition to one complete version of the comments that includes information claimed as CBI, you must submit a copy of the comments that does not contain the information claimed as CBI directly to the public docket through the procedures outlined in *Instructions* above. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI and note the docket ID. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2.

Our preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol (FTP), or other online file sharing services (*e.g.*, Dropbox, OneDrive, Google Drive). Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address [oaqpscbi@epa.gov](mailto:oaqpscbi@epa.gov), and as described above, should include clear CBI markings and note the docket ID. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email [oaqpscbi@epa.gov](mailto:oaqpscbi@epa.gov) to request a file transfer link. If sending CBI information through the postal service, please send it to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA-HQ-OAR-2021-0664. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

*Preamble acronyms and abbreviations.* Throughout this notice the use of “we,” “us,” or “our” is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

BACT	Best Available Control Technology
BID	Background Information Document
BSER	Best System of Emissions Reduction
CAA	Clean Air Act
CBI	Confidential Business Information
CFR	Code of Federal Regulations
CO	carbon monoxide
CPMS	Continuous Parametric Monitoring System
CTG	Control Techniques Guidelines
EDP	electrodeposition
EPA	Environmental Protection Agency
ERT	Electronic Reporting Tool
LAER	Lowest Available Control Technology
kg/l acs	kilogram per liter of applied coating solids
mtCO <sub>2</sub> e	metric tons of carbon dioxide equivalents
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
Non-EDP	non-electrodeposition
NSPS	New Source Performance Standards
NTTAA	National Technology Transfer and Advancement
OAQPS	Office of Air Quality Planning and Standards
OECA	Office of Enforcement and Compliance Assurance
OMB	Office of Management and Budget
lb/gal acs	pounds per gallon of applied coating solids
PM	particulate matter
PRA	Paperwork Reduction Act
RACT	Reasonably Available Control Technology
RIA	Regulatory Impact Analysis
RIN	Regulatory Information Number
RTO	Regenerative Thermal Oxidizer
SBA	Small Business Administration
SSM	startup, shutdown, and malfunctions
scfh	standard cubic feet per hour
scfm	standard cubic feet per minute
tpy	tons per year
TSD	Technical Support Document
U.S.C.	United States Code
VCS	Voluntary Consensus Standards
VOC	volatile organic compound(s)

*Organization of this document.* The information in this preamble is organized as follows:

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- F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
- G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
- H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use
- I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR part 51
- J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

**I. General Information**

*A. Does this action apply to me?*

The source category that is the subject of this proposal is automobile and light duty truck (ALDT) surface coating operations regulated under CAA section 111 New Source Performance Standards. The North American Industry Classification System (NAICS) codes for the ALDT manufacturing industry are 336111 (automotive manufacturing), 336112 (light truck and utility vehicle manufacturing), and 336211 (manufacturing of truck and bus bodies and cabs and automobile bodies). These NAICS codes provide a guide for readers regarding the entities this proposed action is likely to affect. We estimate that 15 facilities engaged in ALDT manufacturing will be affected by this proposal over the next 8 years. The proposed standards, once promulgated, will be directly applicable to affected facilities that begin construction, reconstruction, or modification after the date of publication of the proposed standards in the

*Federal Register*. Federal, state, local, and tribal government entities would not be affected by this proposed action.

*B. Where can I get a copy of this document and other related information?*

In addition to being available in the docket, an electronic copy of this action is available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this proposed action at <https://www.epa.gov/stationary-sources-air-pollution/automobile-and-light-duty-truck-surface-coating-operations-new>. Following publication in the *Federal Register*, the EPA will post the *Federal Register* version of the proposal and key technical documents at this same website.

The proposed changes to the CFR that would be necessary to incorporate the changes proposed in this action are presented in an attachment to the memorandum titled: *Proposed Regulation Edits for 40 CFR Part 60, Subparts MM and MMA: Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations*. This memorandum is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2021-0664). Following signature by the EPA Administrator, the EPA will also post a copy of the memorandum and the attachments to <https://www.epa.gov/stationary-sources-air-pollution/automobile-and-light-duty-truck-surface-coating-operations-new>.

## **II. Background.**

*A. What is the statutory authority for this action?*

The EPA's authority for this rule is CAA section 111, which governs the establishment of standards of performance for stationary sources. Section 111(b)(1)(A) of the CAA requires the EPA Administrator to list categories of stationary sources that in the Administrator's judgment cause or contribute significantly to air pollution that may reasonably be anticipated to endanger public health or welfare. The EPA must then issue performance standards for new (and modified or reconstructed) sources in each source category pursuant to CAA section 111(b)(1)(B). These standards are referred to as new source performance standards or NSPS. The EPA has the

authority to define the scope of the source categories, determine the pollutants for which standards should be developed, set the emission level of the standards, and distinguish among classes, types, and sizes within categories in establishing the standards.

CAA section 111(b)(1)(B) requires the EPA to “at least every 8 years review and, if appropriate, revise” new source performance standards. In setting or revising a performance standard, CAA section 111(a)(1) provides that performance standards are to “reflect the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.” 42 U.S.C. 7411(a)(1). This definition makes clear that the EPA is to determine both the best system of emission reduction (BSER) for the regulated sources in the source category and the degree of emission limitation achievable through application of the BSER. The EPA must then, under CAA section 111(b)(1)(B), promulgate standards of performance for new sources that reflect that level of stringency. CAA section 111(b)(5) precludes the EPA from prescribing a particular technological system that must be used to comply with a standard of performance. Rather, sources can select any measure or combination of measures that will achieve the standard.

Pursuant to the definition of new source in CAA section 111(a)(2), proposed standards of performance apply to facilities that commence construction, reconstruction, or modification after the date of publication of such proposed standards in the *Federal Register*.

B. *What is the source category and how does the current standard regulate emissions?*

Pursuant to the CAA section 111 authority described above, the EPA listed the ALDT surface coating source category as a source category under CAA section 111(b)(1). 44 Fed. Reg. 49222, 49226 (Aug. 21, 1979).).

The NSPS for ALDT surface coating operations (ALDT NSPS) were promulgated at 40 CFR Part 60, subpart MM on December 24, 1980 (45 FR 85415, December 24, 1980). Subpart

MM applies to affected facilities that commence construction, reconstruction, or modification after October 5, 1979. The affected facility is defined as each prime coat operation, each guide coat operation, and each topcoat operation in an automobile or light duty truck assembly plant. The NSPS applies to these sources regardless of production capacity. The ALDT NSPS established VOC emission limits calculated on a monthly basis for each electrodeposition (EDP) prime coat operation, guide coat (primer-surfacer) operation and topcoat operation. The emission limits and reporting requirements in the 1980 ALDT NSPS were amended in a series of actions from 1980 to 1994 (59 FR 51383, October 11, 1994) to include innovative technology review waivers to increase the topcoat operation VOC emission limitations for certain plants, to reduce the reporting frequency for deviations from the rule requirements from quarterly to semiannually, and to revise the VOC emission limitation for the EDP prime coat operation in response to an industry petition for reconsideration. The innovative technology waivers were issued under CAA sections 111(j) and 173 to nine auto assembly plants for topcoat operations based on their continued use of solvent borne topcoat (base coat/clear coat enamel) to achieve a high-quality finish instead of converting to a waterborne topcoat. The VOC emission limits for the EDP prime coat operation were revised in response to an industry reconsideration petition to base the emission limit on an equation that includes a term for the EDP prime coat dip tank solids turnover ratio ( $R_T$ ), which is the ratio of the total volume of coating solids that is added to the EDP prime coat system in a calendar month divided by the total volume design capacity of the EDP prime coat system.

Subsequent to the ALDT NSPS, the EPA promulgated other regulatory actions pursuant to CAA sections 112 and CAA 183(e) that also regulate or otherwise address emissions from the same ALDT surface coating operations. These regulatory actions include: the National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks at 40 CFR Part 63, subpart IIII (ALDT NESHAP) promulgated on April 26, 2004 (69 FR 22623), the Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly

Coatings, EPA-453/R-08-006, September 2008 (2008 ALDT CTG) and the ALDT NESHAP risk and technology review (RTR) promulgated on July 8, 2020 (85 FR 41100).

Although the resulting ALDT NESHAP requirements and ALDT CTG recommendations cannot be compared directly to the ALDT NSPS due to the differences in CAA authorities, pollutants, emission limits and format, they apply to the same coating materials and operations and were therefore considered in our review.

The affected surface coating operations at an assembly plant described in the 1980 ALDT NSPS included the prime coat operation, the guide coat operation, and the topcoat operation. The prime coat operation employed the use of a waterborne coating and included the prime coat spray booth or dip tank, a series of rinses, and a bake oven to apply and cure the prime coat on automobile and light-duty truck bodies. The guide coat operation followed the prime coat operation and included the guide coat spray booth, flash-off area and bake oven(s) which were used to apply and dry or cure a surface coating between the prime coat and topcoat operations on the components of automobile and light-duty truck bodies. The topcoat operation followed the guide coat operation and included the topcoat spray booth, flash-off area, and bake oven(s) which were used to apply and dry or cure the final coating(s) on components of automobile and light-duty truck bodies. The topcoat operation included both single stage topcoats (lacquers) and topcoats applied in two stages (enamels) consisting of a pigmented basecoat applied prior to an overlying clearcoat.

As discussed in the 1979 ALDT NSPS proposal preamble, most ALDT facilities had non-EDP (spray applied) prime coat systems and planned to switch to an EDP (dip tank) prime coat system to reduce VOC emissions to comply with state implementation plans (SIPs) (44 FR 57795). No control devices were used to control prime coat operation emissions at that time. For guide coat and topcoat operations, only two ALDT facilities used waterborne coatings and the remaining facilities used solvent borne coatings. Topcoat operations employed the use of solvent

borne coatings and VOC control devices such as regenerative thermal oxidizers (RTO) and catalytic oxidizers.

The 1979 ALDT NSPS proposal evaluated two regulatory options to control VOC emissions from ALDT surface coating operations. (44 FR 57795) The first option was determined to be the standard that reflected the level of emission reduction achievable by the BSER and was based on two equivalent control alternatives. Alternative A was based on the use of EDP waterborne prime coat, waterborne guide coats and topcoats, and no controls; and Alternative B was based on the use of EDP waterborne prime coat and solvent borne guide coats and topcoats, with control of the topcoat booth and oven. The second regulatory option was determined to be not cost-effective and consisted of Alternative B with control of the guide coat booth and oven. The evaluation also took into account the differences between ALDT surface coating operations using lacquer coatings versus enamel coatings as the industry was in the process of converting to enamel coatings at the time. The associated energy and economic impacts of the options were also assessed using growth projections for the industry. Additional details on the development of the ALDT NSPS can be found in the document titled *Automobile and Light Duty Truck Surface Coating Operations, Background Information for Proposed Standards, EPA-450/3-79-030, September 1979*, available in the docket for this action.

The ALDT NSPS, as promulgated in 1980 and amended in 1994, established separate volatile organic compounds (VOC) emission limitations for each surface coating operation:

- For prime coat operations
  - For EDP (dip tank) prime coat, 0.17 to 0.34 kilograms VOC/liter applied coating solids (kg VOC/l acs) (1.42 to 2.84 lbs VOC/gal acs) depending on the solids turnover ratio ( $R_T$ ); For  $R_T$  greater than 0.16, the limit is 0.17 kg VOC/l acs (1.42 lb VOC/gal acs); for turnover ratios less than 0.04, there is no emission limit.
  - For Non-EDP (spray applied) prime coat, 0.17 kg VOC/l acs (1.42 lb VOC/gal acs);

- For guide coat operations, 1.40 kg VOC/l acs (11.7 lb VOC /gal acs); and
- For topcoat operations, 1.47 kg VOC/l acs (12.3 lb VOC/gal acs).

Surface coating operations for plastic body components or all-plastic automobile or light-duty truck bodies on separate coating lines are exempted from the ALDT NSPS; however, the attachment of plastic body parts to a metal body before the body is coated does not cause the metal body coating operation to be exempted.

The ALDT NSPS requires a monthly compliance demonstration for each operation which is the calculation of mass of VOC emitted per volume of applied coating solids (kg VOC/l acs or lbs VOC/gal acs) each calendar month. The ALDT NSPS provides default transfer efficiencies (TE) for the various surface coating application methods that were in practice at the time for the monthly compliance calculation. TE is the ratio of the amount of coating solids transferred onto the surface of a part or product to the total amount of coating solids used. Higher TEs indicate a higher fraction of coatings solids are deposited onto the part or product and a lower fraction of coating solids become overspray that is captured by the spray booth filters or is deposited onto the spray booth grates, walls and floor, or to the water collection system below the grates. The default TE values in the NSPS also account for the recovery of purge solvent. The monthly compliance calculation also takes into consideration the VOC destruction efficiency (as determined by the initial or the most recent performance testing of control devices) needed to meet the VOC emission limitations. The control devices identified in the ALDT NSPS include thermal and catalytic oxidizers. In addition, the NSPS requires continuous monitoring of temperature for the thermal and catalytic oxidizers. Quarterly reporting is required to report emission limit exceedances and negative reports are required for no exceedances.

Today, all prime coat operations at ALDT facilities use waterborne coatings and cathodic EDP systems. The guide coat operations use a variety of coatings, including waterborne, solvent borne and powder coatings using automatic (including robotic) and manual high efficiency spray application technologies. The topcoat operations use waterborne and solvent borne coatings and

are applied using a “2-wet” application process using automatic (including robotic) and manual and high efficiency spray application technologies. The guide coat and topcoat processes have also been combined by some facilities in an application referred to as “3-wet” process in which the guide coat booth is followed by a heated flash zone (instead of an oven) and the topcoat (base coat and clearcoat) is subsequently applied before the vehicle body proceeds to the topcoat flash zone and oven. Additional details on the developments and current industry practices can be found in the document titled *Best System of Emission Reduction Review for Surface Coating Operations in the Automobile and Light-Duty Truck Source Category (40 CFR Part 60, subpart MM)*, located in the docket for this action.

The EPA estimates that there are 45 ALDT assembly plants located in 14 states and owned by 16 different parent companies. Of the 45 ALDT assembly plants, one parent company owning a single plant will no longer be considered a small entity by the end of this year (2022) due to the anticipated sale of the affected portions of the plant to a company that is not a small entity. One other plant plans to start construction in May 2022 and is not a small entity. We did not include this plant in our NSPS review due to lack of data for the plant, but we did include its location in our demographic analysis and tribal proximity analysis.

Based on our review, we have determined that 44 of the 45 assembly plants are currently subject to the ALDT NSPS in 40 CFR part 60, subpart MM, all of which have affected surface coating operations that were constructed, reconstructed, or modified after October 5, 1979. One plant is not subject to the ALDT NSPS due to an exemption for the coating of all plastic bodies, which we address in this action. Based on our review of best achievable control technology (BACT) and lowest achievable emission rate (LAER) limits for new, modified, or reconstructed ALDT surface coating operations, we determined that about one-third of the assembly plants are subject to limits that are more stringent than the limits in the ALDT NSPS subpart MM. We also determined that 44 of the 45 ALDT assembly plants are also currently subject to the ALDT NESHAP in 40 CFR part 63, subpart IIII. One plant is not subject to the ALDT NESHAP



because it is considered to be an area source and not a major source under CAA section 112. The number of employees and annual revenues are expected to increase for this plant as it increases production and is expected to become a CAA 112 major source in 2022. Therefore, for the purpose of this analysis, it was considered to be a CAA 112 major source.

*C. What data collection activities were conducted to support this action?*

During our review of the current ALDT NSPS (40 CFR part 60, subpart MM) and the development of the proposed new ALDT NSPS subpart MMa (*i.e.*, 40 CFR part 60, subpart MMa) we used emissions and supporting data from the 2017 National Emissions Inventory (NEI). A variety of sources were used to compile a list of facilities subject to subpart MM. The list was based on information provided by the industry association, the Auto Industry Forum, and confirmed with information downloaded from the EPA's Enforcement and Compliance History Online (ECHO) database and the EPA's Emissions Inventory System (EIS) database. The ECHO system contains compliance and permit data for stationary sources regulated by the EPA. The ECHO database was queried by Standard Industrial Classification (SIC) and NAICS code as well as by subpart.

We also reviewed EPA's RACT/BACT/LAER Clearinghouse database to identify BACT and LAER determinations for ALDT surface coating operations, including more stringent emission limitations than the ALDT NSPS as well as potential new control technologies. The terms "RACT," "BACT," and "LAER" are acronyms for different program requirements relevant to the NSR program. RACT, or Reasonably Available Control Technology, is required on existing sources in areas that are not meeting national ambient air quality standards (NAAQS) (non-attainment areas). BACT, or Best Available Control Technology, is required on new or modified major sources in areas meeting NAAQS (attainment areas). LAER, or Lowest Achievable Emission Rate, is required on new or modified major sources in non-attainment areas.

*D. What other relevant background information and data are available?*

In addition to the NEI, ECHO and EIS databases, the EPA reviewed the additional information sources listed below for advances in technologies, changes in cost, and other factors to review the standards for ALDT affected sources. These include the following:

- Operating permits for 40 of 44 of the ALDT assembly plants.
- Compliance demonstration reports including control device performance data for one-fourth of the plants.
- Publicly available facility inspection reports and other information on state websites.
- Construction permits and BACT determinations from EPA Region 5 and state agencies.
- *Automobile and Light Duty Truck Surface Coating Operations, Background Information for Proposed Standards*, EPA-450/3-79-030, September 1979.
- *Automobile and Light Duty Truck Surface Coating Operations, Background Information for Promulgated Standards*, EPA-450/3-79-030b, September 1980.
- Background documents and industry supplied data for supporting regulatory actions promulgated subsequent to the 1980 ALDT NSPS, including the 2004 ALDT NESHAP, the 2020 RTR amendments to the 2004 ALDT NESHAP, and the 2008 CTG for Automobile and Light-Duty Truck Assembly Coatings.

**III. How does the EPA perform the NSPS review?**

As noted in section II.A., CAA section 111 requires the EPA, at least every 8 years to review and, if appropriate revise the standards of performance applicable to new, modified, and reconstructed sources. If the EPA revises the standards of performance, they must reflect the degree of emission limitation achievable through the application of the BSER taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements. CAA section 111(a)(1).

In reviewing an NSPS to determine whether it is “appropriate” to revise the standards of performance, the EPA evaluates the statutory factors, including the following information:

- Expected growth for the source category, including how many new facilities, reconstructions, and modifications may trigger NSPS in the future.
- Pollution control measures, including advances in control technologies, process operations, design or efficiency improvements, or other systems of emission reduction, that are “adequately demonstrated” in the regulated industry.
- Available information from the implementation and enforcement of current requirements indicates that emission limitations and percent reductions beyond those required by the current standards are achieved in practice.
- Costs (including capital and annual costs) associated with implementation of the available pollution control measures.
- The amount of emission reductions achievable through application of such pollution control measures.
- Any non-air quality health and environmental impact and energy requirements associated with those control measures.

In evaluating whether the cost of a particular system of emission reduction is reasonable, the EPA considers various costs associated with the particular air pollution control measure or a level of control, including capital costs and operating costs, and the emission reductions that the control measure or particular level of control can achieve. The agency considers these costs in the context of the industry’s overall capital expenditures and revenues. The agency also considers cost-effectiveness analysis as a useful metric, and a means of evaluating whether a given control achieves emission reduction at a reasonable cost. A cost-effectiveness analysis allows comparisons of relative costs and outcomes (effects) of two or more options. In general, cost-effectiveness is a measure of the outcomes produced by resources spent. In the context of air pollution control options, cost-effectiveness typically refers to the annualized cost of implementing an air pollution control option divided by the amount of pollutant reductions realized annually.

After the EPA evaluates the factors described above, the EPA then compares the various systems of emission reductions and determines which system is “best.” The EPA then establishes a standard of performance that reflects the degree of emission limitation achievable through the implementation of the BSER. In doing this analysis, the EPA can determine whether subcategorization is appropriate based on classes, types, and sizes of sources, and may identify a different BSER and establish different performance standards for each subcategory. The result of the analysis and BSER determination leads to standards of performance that apply to facilities that begin construction, reconstruction, or modification after the date of publication of the proposed standards in the *Federal Register*. Because the new source performance standards reflect the best system of emission reduction under conditions of proper operation and maintenance, in doing its review, the EPA also evaluates and determines the proper testing, monitoring, recordkeeping and reporting requirements needed to ensure compliance with the emission standards.

See sections II.C. and D. of this preamble for information on the specific data sources that were reviewed as part of this action.

#### **IV. Analytical Results and Proposed Rule Summary and Rationale**

*A. What are the results and proposed decisions based on our NSPS review, and what is the rationale for those decisions?*

This action presents the EPA’s review of the requirements of 40 CFR part 60, subpart MM pursuant to CAA 111(b)(1)(B). As described in section III of this preamble, the statutory review of NSPS subpart MM for ALDT surface coating operations focused on whether there are any emission reduction techniques that are used in practice that achieve greater emission reductions than those currently required by NSPS subpart MM for ALDT surface coating operations and whether any of these developments in practices have become the “best system of emissions reduction.” Based on this review, we have determined that there are techniques used in practice that achieve greater emission reductions than those currently required by NSPS subpart

MM for ALDT surface coating operations. The results and proposed decisions based on the analyses performed pursuant to CAA section 111(b) are presented in more detail below. Pursuant to CAA section 111(a), the proposed standards included in this action would apply to facilities that begin construction, reconstruction, or modification after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

To develop the costs and emission reductions for this review we used data obtained from readily available stack test reports and operating permits for eight ALDT facilities. Although the prime coat, guide coat, and topcoat operations are separate affected facilities with separate emission limitations, the operations are considered to be a surface coating system and as such, we found during our review they are often controlled as a system and share common control devices. These control devices also control other operations that are not affected facilities and are not subject to the ALDT NSPS (*i.e.*, sealer/deadener ovens subject to more stringent requirements than ALDT CTG presumptive RACT are vented to a shared RTO). Few surface coating operations have dedicated control devices, so it was challenging to estimate the cost and emission reduction associated with controlling each individual affected facility (*i.e.*, the prime coat, guide coat, and topcoat affected facility) for each option. We are soliciting comments (including data, information, analysis and other input) with respect to the emission reductions and cost-effectiveness identified for each option presented below. Additional detailed information on control devices used by the industry and the methodology used to estimate the emission reductions and cost-effectiveness are provided in the memorandum titled *Cost and Environmental Impacts Memo for Surface Coating Operations in the Automobiles and Light-Duty Trucks Source Category (40 CFR Part 60, subpart MMA)*, located in the docket for this action.

As required by CAA section 111, the EPA's BSER analysis for ALDT NSPS affected surface coating operations (prime coat, guide coat, and topcoat) considered the air quality impacts of the VOC-reducing control measures and the secondary impacts of these control

measures. Indirect or secondary impacts are impacts that would result from the increased electricity usage and natural gas consumption associated with the operation of control devices to meet the revised VOC emission limits proposed for subpart MMA. These impacts were calculated on a per facility basis and were based on the ALDT facilities for which we had data. Based on the data for these ALDT facilities all three surface coating operations were affected and the entire coating line was considered to be new, reconstructed or modified. The annual average VOC emission reduction associated with the BSER analysis for the three ALDT affected surface coating operations is estimated to be 331 tpy per facility. The energy impact estimates associated with these VOC emission reductions include an increase in the average electricity consumption per facility of 2.54 million kwh per year and an increase in the average natural gas consumption per facility of 48.8 million scf per year. Based on these results, the EPA concluded there are no meaningful secondary impacts associated with this proposed action.

The EPA also evaluated other air quality impacts of the control measures including greenhouse gas (GHG) production. We estimate the increased usage of electricity and natural gas would result in an increase in the average production of 4,474 metric tons of carbon dioxide equivalents (mtCO<sub>2</sub>e) of GHG emissions per facility per year. We did not evaluate the impacts of the control measures on other pollutants such as hydrocarbons (other than VOC), NO<sub>x</sub>, and CO. We found these pollutants to be regulated by the states for this source category. Based on these results, the EPA concluded there are no meaningful impacts associated with other criteria pollutants as a result of this proposed action.

We are soliciting comments (including data, information, analysis and other input) with respect to the results of our analysis of the air emissions impacts, including the secondary impacts of the control measures presented here. Additional detailed information is provided in the memorandum titled *Cost and Environmental Impacts Memo for Surface Coating Operations in the Automobiles and Light-Duty Trucks Source Category (40 CFR Part 60, subpart MMA)*, located in the docket for this action.

*a. What are the proposed requirements for new ALDT prime coat operations?*

The ALDT surface coating process begins with a bare metal vehicle body. The body first goes through a zinc phosphate process. This process removes particulates from surface of the vehicle body. It also provides corrosion resistance and promotes adhesion between the metal and paint. The vehicle body is then submerged in the EDP prime coat dip tank. The EDP prime coat tank contains a mixture of water, particles of resin and pigment, and solvent. An electric current in the bath causes prime coat particles to deposit onto the body, including into enclosed areas that would not be coated in a conventional spray coating operation. After a predetermined amount of prime coat has been deposited, the body is removed from the bath, rinsed of excess coating, and then goes to a heated oven to cure the primer. Inside the curing oven, solvent that is contained in the primer particles is released. The VOC emissions from ALDT prime coat operations are generated from the evaporation of solvent in the EDP prime coat curing oven and, to a much lesser extent, from evaporation of the solvent included in the aqueous solution in the dip tank.

The current ALDT NSPS prime coat limit in 40 CFR 60.392(a) is 0.17 kg VOC/l acs (1.42 lb VOC/gal acs) and is based on the use of waterborne EDP prime coat operation without the use of add-on controls. According to facility operating permits reviewed for this action, 19 facilities with 28 EDP prime coat operations are currently subject to more stringent prime coat limits than the current ALDT NSPS prime coat limit. All but two of these 28 EDP prime coat operations with more stringent limits are controlled with a thermal oxidizer, catalytic oxidizer, or RTO on the curing oven exhaust. Four of these facilities also control the emissions from the EDP prime coat dip tank (in addition to the oven emissions) with some form of thermal oxidation. The prime coat limits for these facilities that are more stringent than the NSPS range from 0.005 kg/l acs (0.04 lb VOC/gal acs) to 0.16 kg VOC/l acs (1.34 lb VOC/gal acs); the average is 0.040 kg VOC/l acs (0.33 lb VOC/gal acs) and the median is 0.024 kg VOC/l acs (0.20 lb VOC/gal acs). As a result of the information and findings described above, we evaluated two regulatory options

that are more stringent than the current NSPS for prime coat operation, that are demonstrated by facilities using an EDP prime coat dip tank system to apply the prime coat.

The first option evaluated in the ALDT NSPS review is a numerical VOC emission limit of 0.028 kg VOC/l acs (0.23 lb VOC/gal acs) based only on control of the curing oven emissions with thermal oxidation (*e.g.*, an RTO) that is capable of achieving 95-percent destruction and removal efficiency (DRE). The estimated annual cost of control per facility would be \$356,000/year and the annual VOC emission reductions per facility would be 52 tpy, for a cost-effectiveness of \$6,800/ton of VOC reduced. The EPA considers this option to be cost-effective over the baseline level of control. This regulatory option is also consistent with a compliance option for EDP primer systems in the ALDT NESHAP (40 CFR 63, subpart IIII). At 40 CFR 63.3092(b), affected sources may exclude the EDP prime coat emissions from their compliance calculations if the emissions from the oven used to cure EDP primers are captured and controlled by a control device having a destruction or removal efficiency of at least 95 percent. This compliance option is one of the reasons why many EDP prime coat affected sources are already fitted with a control device on the EDP prime coat ovens. Another option under 40 CFR 63.3092(a) allows source owners to exclude the EDP prime coat emissions from their compliance calculations is to ensure that each individual material added to the EDP primer system contains no more than a prescribed level of HAP; however, this option is less feasible for most facilities because certain materials commonly used in the EDP prime coat process cannot meet these criteria.

The second option we evaluated is a numerical VOC emission limit of 0.005 kg/l acs (0.040 lb VOC/gal acs) to reflect control of both the oven and the tank emissions with an RTO capable of achieving 95 percent DRE. Based on data from emissions testing at a facility with this control option, we estimated the cost-effectiveness of controlling the tank emissions to be \$91,061 per ton of VOC reduced. In addition, we estimated this option would achieve (only) an additional 3 tpy of VOC reductions over the first option and would have an estimated



incremental cost-effectiveness of \$46,000 per ton of VOC reduced compared to the first option. Because this option is significantly less cost-effective than the baseline level of control, and has a high incremental cost per ton compared to the first option, we have determined the second option does not reflect BSER.

Based on the analysis described above, we are proposing to revise the VOC emission limit for the prime coat operation. The proposed VOC emission limit reflects the EPA's determination that control of the curing oven emissions with thermal oxidation that is capable of achieving 95 percent DRE represents the updated BSER for prime coat operation. The proposed revised standard would limit VOC emissions from prime coat operations to 0.028 kg VOC/l acs (0.23 lb VOC/gal acs) based on the control of the curing oven emissions only. This proposed VOC emission limit also matches the operating permit limit for 13 of the 44 plants for which we have data, therefore we consider this limit to be adequately demonstrated.

If finalized, the revised emission limit for prime coat operations will appear as the new limit in the new ALDT NSPS subpart MMa. It will not include the solids turnover ratio ( $R_T$ ) which is a factor in determining VOC emission limit for the prime coat dip tank in the current subpart MM, because this factor is not included in the facility permits that are more stringent than the NSPS and that were the basis of our revised BSER determination.

In the current subpart MM, the VOC emission limit for the dip tank varies according to the solids turnover ratio. As the  $R_T$  varies (ranging from 0.040 (or less) to 0.16 (or greater)), the emission limit varies (ranging from 0 to 0.17 kg VOC/l acs). In the current subpart MM, the non-EDP (spray-applied) prime coat emission limit matches the maximum EDP prime coat limit of 0.17 kg VOC/l acs and does not include the  $R_T$  because the coating solids are not depleted in a spray application as they are in a dip tank.

Because the permit limits do not include factors to account for the solids turnover ratio, we understand that to mean that facilities currently using the EDP prime coat process are able to consistently maintain the solids turnover ratio at a value equal to or greater than 0.16, and we are

proposing that the  $R_T$  factor is no longer needed. Similar to the current subpart MM, we are also proposing the same emission limit of 0.028 kg VOC/l acs (0.23 lb VOC/gal acs) for non-EDP (spray-applied) prime coat operations in subpart MMa.

In conclusion, based on our review, the EPA is proposing in a new subpart (subpart MMa) a VOC emission limit of 0.028 kg VOC/l acs (0.23 lb VOC/gal acs) for the prime coat operation based on the control of the curing oven emissions with thermal oxidation (*e.g.*, an RTO) that is capable of achieving 95 percent DRE for prime coat operations that commence construction, reconstruction, or modification after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

*b. What are the proposed requirements for new ALDT guide coat operations?*

After the prime coat operation, sealer and other materials are applied to the vehicle body. The vehicle body is then routed to a series of spray booths and ovens in which a guide coat is applied followed by application of the topcoat which consists of a base coat and a clear coat. Review of the facility operating permits show that current guide coat operations use either a waterborne or solvent borne coating with a small number of facilities using a powder guide coat. The guide coat operation may have heated flash off zones, in addition to, or replacing the guide coat oven. The guide coat can be applied in either a 2-wet coating process or a 3-wet coating process. In a 2-wet coating process, the guide coat is fully cured in an oven before the following topcoat operation. In a 3-wet coating process, the guide coat is partially cured in a heated flash off area before the following topcoat operation. The VOC emissions from the guide coat curing ovens are almost always controlled by a thermal oxidizer. The VOC emissions from the guide coat booths and flash off areas may be controlled by either a thermal oxidizer or by a combination of a concentrator followed by a thermal oxidizer. The concentrator may be either a carbon adsorber or zeolite-based system. The VOC emissions from ALDT guide coat operations are generated from the evaporation of solvent in the guide coat spray booth, flash off zone, and curing oven.

The current ALDT NSPS guide coat limit in 40 CFR 60.392 is 1.40 kg VOC/l acs (11.7 lb VOC/gal acs) and was based on the use of waterborne or solvent borne guide coats without the use of add-on controls. According to facility operating permits, 14 facilities with 31 guide coat lines (including some anti-chip coatings that are used in addition to the guide coat) are subject to more stringent guide coat limits than the current ALDT NSPS limit. Three facilities with guide coating limits more stringent than the ALDT NSPS are using powder coating for the guide coating operation, according to the operating permits collected and reviewed by the EPA. The guide coat emission limits more stringent than the current ALDT NSPS guide coat limits range from 0.060 to 1.21 kg VOC/l acs (0.050 to 10.11 lb VOC/gal acs); and 27 of the 31 guide coat lines were subject to limits less than or equal to 0.69 kg VOC/l acs (5.5 lb VOC/gal acs). As a result of the information and findings described above, we evaluated four regulatory options that are more stringent than the current ALDT NSPS for guide coat operations. The regulatory options include the use of add-on controls for waterborne or solvent borne guide coat operations or using a powder coating system instead of a liquid coating system.

The first option evaluated in the ALDT NSPS review is a numerical VOC emission limit of 0.57 kg VOC/l acs (4.8 lb VOC/gal acs) to reflect use of solvent borne or waterborne guide coat and an RTO with 95 percent DRE on the guide coat oven only and no add-on controls for the guide coat spray booth or heated flash off zone exhausts. The limit of 0.57 kg VOC/l acs (4.8 lb VOC/gal acs) was selected to represent this option because it is the most common numerical permit limit in the range of 0.41 to 0.66 kg VOC/l acs (3.46 to 5.5 lb VOC/gal acs) matching the operating permit limit for 9 facilities with this control scenario. We estimate this option would reduce emissions from a typical guide coat operation by about 40 tpy of VOC at a cost of \$4,400 per ton of VOC reduced.

The second option is a numerical VOC emission limit of 0.35 kg VOC/l acs (2.92 lb VOC/gal acs) to reflect the use of solvent borne guide coat and 95 percent control of the spray booth and oven with either a carbon adsorber and an RTO or a concentrator and an RTO. The

carbon adsorber/concentrator is used to control the spray booth emissions and routes the concentrated exhaust stream to the RTO, which also controls the oven emissions. One facility meeting this limit, in addition to using a concentrator, recirculates 85 percent of the exhaust air in the spray booth back to the booth and 15 percent of the exhaust is sent to concentrator and then to the RTO, which also controls the oven emissions. This second option matches the presumptive BACT emission limit for 2020 identified by the EPA Region 5.<sup>1</sup> Two facilities are subject to this numerical emission limit. We estimated this option would reduce emissions from a typical guide coat operation by about 50 tpy of VOC at a cost of \$4,900 per ton of VOC reduced.

The third option is a numerical VOC emission limit of 0.036 kg VOC/l acs (0.30 lb VOC/gal acs) to reflect the use of a waterborne guide coat applied in a 3-wet process for one facility. In a 3-wet process the guide coat operation and the topcoat operation are combined, and the guide coat oven is basically eliminated. The 3-wet process consists of a series of two separate booths with heated flash off zones for partial cure (one for the guide coat and one for the basecoat), followed by a clearcoat booth, a flash zone, and a topcoat oven (where the guide coat, the basecoat, and the topcoat are fully cured). The 3-wet process uses a heated flash off zone in place of the guide coat oven resulting in less emissions from the guide coat operation, and a more efficient process in terms of time and energy savings for the facility. A 3-wet process reportedly can lower a plant's energy consumption by 30 percent and reduce the total amount of process time per vehicle by 80 minutes for a 40 percent increase in productivity.

Only one facility (with two lines) uses this 3-wet process for the guide coat operation and is subject to this numerical permit limit (0.036 kg VOC/l acs (0.30 lb VOC/gal acs)). We estimate this configuration would reduce emissions from a typical guide coat operation by about 73 tpy of VOC at a cost of \$3,252 per ton of VOC reduced. The costs associated with this option are for controlling the heated flash zone emissions with an RTO with 95 percent DRE. Although

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<sup>1</sup>See email correspondence between the U.S. EPA OAQPS and Region 5 regarding 2020 BACT values in the RBLC database for ALDT surface coating operations.

this third option is cost-effective when considering the cost of controls, the emission limit cannot be achieved without reconfiguring the guide coat operation to eliminate a major component (the guide coat oven), which would be a major capital investment and not cost effective for the purposes of this analysis. Therefore, the EPA is not proposing this option.

The fourth option we considered is a numerical VOC limit of 0.016 kg VOC/l acs (0.13 lb VOC/gal acs) to reflect the use of powder guide coat, instead of a liquid coating. One facility is meeting an emission limit of 0.016 kg VOC/l acs (0.13 lb VOC/gal acs) and three facilities are meeting a lower emission limit (no emission limit (0 kg VOC/l acs) or 0.006 kg VOC/l acs; no emission limit (0 lb VOC/gal acs) or 0.05 lb VOC/gal acs) based on the use of powder guide coat and no controls. The powder coating is applied electrostatically and is essentially a non-emitting process because the dry powder coating has no solvent. Guide coat operations using powder coatings emit virtually no VOCs from the booth, flash off zone(s), or curing oven. The use of powder for the guide coat operation could eliminate all VOC emissions from a typical guide coat operation with no on-going control costs and could be the best environmental outcome.

However, as discussed in the memorandum titled *Best System of Emission Reduction Review for Surface Coating Operations in the Automobile and Light-Duty Truck Source Category (40 CFR Part 60, subpart MM)*, the process for assessing a new exterior coating system for an ALDT manufacturer can take from 3 to 5 years to determine how it performs with respect to application, quality, performance, and durability. In a meeting with the industry, the difficulties associated with using powder coatings were discussed and included both process and quality issues. These difficulties are included in the memorandum titled *Meeting with The Auto Industry Forum and Industry Representatives*, located in the docket for this rule. Also, some manufacturers have been unable to meet their quality requirements using powder coatings. During our review we noted one facility with two powder guide coat lines switched back to liquid coatings due to the difficulties associated with applying powder coatings to ALDT vehicle bodies. Although we intend to monitor developments in the use of powder coatings due to its potential advantages

(low emissions achieved without the use of controls), we are not proposing this option at this time because it is not adequately demonstrated. Further, it would be not cost effective for the purposes of this analysis due to the major capital investment associated with switching the guide coat operation from a liquid coating application to a powder coating application.

After consideration of all guide coat options, the EPA is proposing to revise the VOC limit for the guide coat operation. The proposed VOC limit reflects the EPA's determination that Option 2, the use of solvent borne guide coat and 95 percent control of the spray booth and oven with either a carbon adsorber and an RTO or a concentrator and an RTO, represents the updated BSER for guide coat operation. The proposed revised standard would limit VOC emissions from guide coat operations to 0.35 kg VOC/l acs (2.92 lb VOC/gal acs). Option 2 provides higher emission reductions than Option 1 and the same range of cost-effectiveness. This option also represents the lower range of emission limits for facilities using solvent borne guide coats. Current facility permits and industry supplied data collected by the EPA for the 2008 ALDT CTG show that solvent borne guide coats are used by three-quarters of the facilities using liquid coatings. The proposed emission limit corresponding to Option 2 is adequately demonstrated by three of 44 plants. The EPA is not proposing limits based on the third and fourth options because they are cost prohibitive.

In conclusion, based on our review, we are proposing in a new subpart (subpart MMA) a VOC emission limit of 0.35 kg VOC/l acs (2.92 lb VOC/gal acs) to reflect the use of solvent borne guide coat and 95 percent control of the spray booth and oven with either a carbon adsorber and an RTO or a concentrator and an RTO for guide coat operations that commence construction, reconstruction, or modification after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

*c. What are the proposed requirements for new ALDT topcoat operations?*

Topcoat operations use two different coatings, a pigmented basecoat followed by a clearcoat (which can be tinted). For the basecoat, facility operating permits show that facilities

use either a waterborne or solvent borne coatings. For the clearcoat, solvent borne coatings are preferred and are used by all ALDT facilities in the U.S. According to data collected for the 2008 ALDT CTG, about half the facilities were using waterborne base coats and about half were using solvent borne base coats, and all facilities were using solvent borne clear coats.<sup>2</sup> Powder coatings are not used for topcoat applications in the U.S.

Today's topcoat operations have several configurations. Some facilities have traditional topcoat operations similar to the guide coat operation and consist of a single spray booth, followed by a flash off zone and a topcoat oven. Topcoat operations using solvent borne basecoat and solvent borne clearcoat use this configuration to apply the coatings "wet-on wet" (2-wet) in the same spray booth.

Other topcoat operation configurations use separate booths to apply the basecoat and the clearcoat before the vehicle body travels thru a flash off zone and the topcoat oven. Topcoat operations using separate booths also include a heated flash off zone after the basecoat booth for a partial cure of the basecoat, in which some of the solvent is evaporated, before the clearcoat is applied in the clearcoat booth. After the clearcoat is applied, the vehicle body travels thru a flash off zone and a topcoat oven where the basecoat and the topcoat are fully cured. This configuration divides the traditional topcoat operation into separate emission sources and introduces an additional emission source (basecoat flash off zone). Today most facilities use separate booths to apply the basecoat and clearcoat.

The third topcoat configuration is the 3-wet process, which is a combination of the guide coat (or functional basecoat) and the topcoat operations. As discussed above in the guide coat option section, the 3-wet process consists of a series of two separate booths with heated flash off zones for partial cure of the guide coat and basecoat, followed by a clearcoat booth, a flash zone, and a topcoat oven (where the guide coat, the basecoat, and the topcoat are fully cured). This

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<sup>2</sup>U.S. EPA Summary of 2006 - 2007 Volatile Organic Compound (VOC) Data. EPA Docket Item No. EPA-HQ-OAR-2008-0413-0041

configuration also divides the traditional topcoat operation into two separate booths and introduces an additional emission source (basecoat flash off zone). In addition, the resulting VOC emissions in the topcoat oven are greater and are comprised of emissions from the partially cured guide coat and base coat and uncured topcoat.

The VOC emissions from ALDT topcoat operations are emitted from the spray booths, the flash off zones and the ovens from the evaporation of solvent from the basecoat and the clear coat. Most ALDT facilities control the VOC emissions from the topcoat spray booths and flash off areas with either a thermal oxidizer or a combination of a concentrator followed by a thermal oxidizer. The concentrator may be either carbon adsorber or zeolite-based system. Most ALDT facilities control the VOC emissions from the topcoat oven with a thermal oxidizer.

The current ALDT NSPS topcoat limit is based on the application of topcoat in one booth and either on the use of waterborne topcoats (waterborne base coat and clearcoat) with no control of the VOC emissions or the use of solvent borne topcoats (solvent borne basecoat and clearcoat) with control of the topcoat booth and oven with a thermal or catalytic oxidizer.

According to facility operating permits, 20 facilities are operating about 25 topcoat lines that are subject to more stringent topcoat limits than the current ALDT NSPS limit of 1.47 kg VOC/l acs (12.3 lb VOC/gal acs). The limits more stringent than the current ALDT NSPS range from 0.28 to 1.44 kg VOC/l acs (2.32 to 12.0 lb VOC/gal acs). As a result of the information and findings described above, we evaluated two regulatory options that are more stringent than the current ALDT NSPS for topcoat operations. The regulatory options include the use of add-on controls for both waterborne and solvent borne basecoats and the use of add-on controls for solvent borne clear coats.

The first option evaluated in the ALDT NSPS review for topcoat operations is based on facilities demonstrating control of the clear coat spray booth and the topcoat oven to meet a topcoat limit of 0.62 kg VOC/l acs (5.20 lb VOC/gal acs). The add-on controls used by facilities demonstrating these emission limits include a thermal oxidizer, usually an RTO achieving 95



percent control of the captured emissions and a concentrator, such as a carbon adsorber or rotary carbon adsorber before the RTO. The concentrator is typically used on relatively high volume, low VOC concentration exhaust streams, such as those from the spray booth. Six facilities with 11 top coating operations have demonstrated control of the clear coat spray booth and the topcoat curing oven to meet a topcoat limit of 0.62 kg VOC/l acs (5.20 lb VOC/gal acs). We estimated that this option would reduce VOC emissions from a typical topcoat operation by 110 tpy of VOC at a cost of \$5,200 per ton of VOC reduced.

The second option considered by the EPA is based on facilities demonstrating control of the basecoat spray booth and/or the basecoat flash zone, as well as the clearcoat spray booth and topcoat oven to meet a topcoat operation limit of 0.42 kg VOC/l acs (3.53 lb VOC/gal acs). The add-on controls used by facilities demonstrating these emission limits (are the same as in the first option) include an include a thermal oxidizer, usually an RTO achieving 95 percent control of the captured emissions and a concentrator, such as a carbon adsorber or rotary carbon adsorber before the RTO. For this second option, the emissions from the basecoat spray booth and/or the basecoat flash zone would be sent to a concentrator before going to the RTO. This option is based on two facilities operating three coating lines and demonstrating control of the basecoat spray booth and/or flash zone, as well as the clearcoat booth and topcoat oven to meet a topcoat operation limit of 0.42 kg VOC/l acs (3.53 lb VOC/gal acs). We estimated that this option would reduce emissions from a typical topcoat operation by 160 tpy of VOC at a cost of \$7,900 per ton of VOC reduced.

After consideration of the two topcoat options, the EPA is proposing to revise the VOC limit for the topcoat operation. The proposed VOC limit reflects the EPA's determination that, Option 2, the control the basecoat spray booth and/or the basecoat heated flash zone, as well as the clear coat booth and the topcoat oven with an RTO or a combination of a concentrator and RTO with the RTO achieving 95 percent control of the captured emissions represents the updated BSER for topcoat operations. The proposed revised standard will limit VOC emissions

from topcoat operations to 0.42 kg VOC/l acs (3.53 lb VOC/gal acs). Option 2 would provide greater emission reductions than Option 1 and is cost-effective. This option also represents the lower range of emission limits for facilities using solvent borne basecoat and clearcoats and this emission limit matches the presumptive BACT emission limit for 2020 identified by EPA Region 5.

In conclusion, based on our review, we are proposing in a new subpart (subpart MMA) a VOC emission limit of 0.42 kg VOC/l acs (3.53 lb VOC/gal acs) to reflect control of the basecoat booth and/or the basecoat flash off zone, as well as the clear coat booth and the topcoat oven with an RTO or a combination of a concentrator/RTO, with the RTO achieving 95 percent control of the captured emissions for topcoat operations that commence construction, reconstruction, or modification after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

*d. What are the proposed requirements for fugitive emissions of VOC?*

CAA section 111(h)(1) authorizes the Administrator to promulgate “a design, equipment, work practice, or operational standard, or combination thereof” if in his or her judgment, “it is not feasible to prescribe or enforce a standard of performance.” CAA section 111(h)(2) provides the circumstances under which prescribing or enforcing a standard of performance is “not feasible,” such as, when the pollutant cannot be emitted through a conveyance designed to emit or capture the pollutant, or when there is no practicable measurement methodology for the particular class of sources.

The ALDT NSPS does not currently regulate fugitive VOC emissions from the storage, mixing, and conveying of VOC-containing materials that include the coatings, thinners, and cleaning materials used in, and waste materials generated by the prime coat, guide coat and topcoat operations. It also does not regulate fugitive VOC emissions from the cleaning and purging of equipment. The results of our review did not identify any ALDT facilities demonstrating control of these fugitive VOC emissions. The fugitive VOC emissions are from

various sources and activities located throughout the ALDT facility and are generally released into the ambient air inside the facility. Further, it would not be cost effective for the purposes of this analysis due to the major capital investment associated with routing these VOC emissions from various locations throughout the ALDT facility to capture and control systems.

The sources of fugitive VOC emissions include containers for VOC-containing materials used for wipe down operations and cleaning; spills of VOC-containing materials; the cleaning of spray booth interior walls, floors, grates and spray equipment; the cleaning of spray booth exterior surfaces; and the cleaning of equipment used to convey the vehicle body through the surface coating operations. The ALDT NESHAP lists work practices to minimize fugitive organic HAP emissions in §63.3094. The work practices include VOC minimizing practices for these sources including: the use of low-VOC and no-VOC alternatives; controlled access to VOC-containing cleaning materials, capture and recovery of VOC-containing materials, use of high-pressure water systems to clean equipment in the place of VOC-containing materials; masking of spray booth interior walls, floors, and spray equipment to protect from over spray; and use of tack wipes or solvent moistened wipes. The ALDT NESHAP work practice provisions require sources to develop and implement a work practice plan to minimize VOC emissions from the storage, mixing, and conveying of coatings, thinners, and cleaning materials used in, and waste materials generated by the prime coat, guide coat and topcoat operations. They also require sources to develop and implement a work practice plan to minimize organic HAP emissions from cleaning and from purging of equipment associated with the prime coat, guide coat and topcoat operations.

The EPA considers the ALDT NESHAP work practices to reflect the best technological system of continuous emission reduction for controlling fugitive emissions of VOC from these sources. We are therefore proposing to include in ALDT NSPS subpart MMa work practices that are consistent with the work practice provisions in the ALDT NESHAP subpart IIII to limit fugitive VOC emissions. We anticipate that adding these work practice requirements to the

ALDT NSPS would cause minimal impacts to the industry because we expect all 44 ALDT facilities identified in this action will be subject to the ALDT NESHAP subpart IIII by 2022. Facilities demonstrating compliance with the ALDT NESHAP subpart IIII work practice provisions will be in compliance with these same requirements in the revised ALDT NSPS subpart MMa.

*e. What are the proposed requirements for new guide coat and topcoat operations for plastic bodies?*

Operations for surface coating of plastic body components or all-plastic automobile or light-duty truck bodies on separate coating lines are exempt from the current ALDT NSPS, subpart MM. See 40 CFR 60.390(b). This exemption was added to subpart MM as a result of two public comments and data documenting the significant problems associated with the use of waterborne topcoats on plastic substrates due to the high temperature required to cure the waterborne coatings (Automobile and Light Duty Truck Surface Coating Operations, Background Information for Promulgated Standards, EPA-450/3-79-030b, September 1980, Comment 2.1.9, page 2-8). Although the ALDT NSPS did not specify the use of waterborne coatings (facilities could use any coating as long as they met the standard), the exemption was added. The intent of the original ALDT NSPS was to regulate VOC emissions from the primary ALDT surface coating operations (prime coat, guide coat and topcoat operations) in an assembly plant regardless of the vehicle body substrate.

During our review of facility operating permits, we found that one facility uses waterborne and solvent borne coatings on all-plastic bodies and is not subject to the ALDT NSPS due to this exemption. The surface coating operations for all-plastic bodies for this facility are instead subject to state VOC RACT rules for the surface coating of plastic parts (discussed below). At all other ALDT facilities the state VOC RACT rules apply to the coating of plastic components coated separately from the vehicle body. Therefore, we are proposing a revision of the plastic parts exemption so that ALDT NSPS subpart MMa applies to the coating of all vehicle bodies,

including all-plastic vehicle bodies to be consistent with the original intent of the ALDT NSPS and the requirements for other ALDT facilities.

One facility has adequately demonstrated the surface coating of all-plastic bodies with waterborne coatings, so the exemption for coating all-plastic bodies is no longer justified. Therefore, we are proposing in a new subpart (subpart MMA) removal of the exemption for surface coating of all-plastic vehicle bodies for operations that commence construction, reconstruction, or modification after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The EPA is aware of only one plant that currently coats all-plastic vehicle bodies and does not expect this facility to become subject to the revised ALDT NSPS over the next 8 years due to recent upgrades made to the plant's surface coating operations.

In this proposal, we are not proposing to remove the exemption with respect to the coating of plastic components coated separately from the vehicle body. Plastic components coated separately from the vehicle body are subject to state VOC RACT rules in accordance with recommendations in the 2008 CTG for Miscellaneous Metal and Plastic Parts Coatings (EPA-453/R-08-003, September 2008) and to the Plastic Parts and Products Surface Coating NESHAP (40 CFR, subpart PPPP) which regulates the organic HAP.

*f. What are the proposed testing, monitoring, and reporting requirements for new ALDT surface coating operations?*

The new source performance standards developed under CAA section 111 are required to reflect the best system of emission reduction under conditions of proper operation and maintenance. For the NSPS review, the EPA also evaluates and determines the proper testing, monitoring, recordkeeping and reporting requirements needed to ensure compliance with the performance standards. As discussed above, other regulatory actions pursuant to CAA sections 112 and CAA 183(e) were promulgated subsequent to the ALDT NSPS that also regulate or otherwise address emissions from ALDT surface coating operations. These regulatory actions include: the 2004 ALDT NESHAP (40 CFR Part 63, subpart IIII (69 FR 2262, April 26, 2004),

the 2008 ALDT CTG (EPA-453/R-08-006, September 2008) and the 2020 RTR amendments to the ALDT NESHAP (85 FR 41100, July 8, 2020). Although the resulting ALDT NESHAP and ALDT CTG requirements cannot be compared directly to the ALDT NSPS due to the differences in CAA authorities, pollutants, emission limits and format, they apply to the same coating materials and operations and were therefore considered in our review. All ALDT facilities are currently subject to and demonstrating compliance with the ALDT NESHAP requirements.

As a result of our review, we are proposing to revise the ALDT NSPS to match the ALDT NESHAP capture and control devices and the associated testing, monitoring, and reporting requirements. We anticipate that adding these requirements to the ALDT NSPS will cause minimal impacts to the industry because all ALDT facilities are currently subject to and demonstrating compliance with the ALDT NESHAP subpart IIII. These requirements will provide for more robust testing, monitoring and reporting than is required in the current ALDT NSPS, and will align the ALDT NSPS and the ALDT NESHAP testing, monitoring and reporting requirements. Facilities that are in compliance with the ALDT NESHAP requirements will also be in compliance with the revised ALDT NSPS MMA requirements, as discussed in the sections below. The proposed updates are described briefly below.

#### Capture and Control Devices

The ALDT NSPS subpart MM lists thermal incineration and catalytic incineration as the technologies used to meet to the VOC emission limits. In addition, subpart MM requires temperature measurement devices to be installed, calibrated and maintained according to accepted practice and manufacturer's specifications. To make the revised NSPS subpart MMA consistent with the ALDT NESHAP subpart IIII, we are proposing to update the list of control devices and the corresponding control device compliance requirements so that the revised NSPS MMA would contain the same list of control devices and corresponding requirements as the ALDT NESHAP subpart IIII. In addition to thermal and catalytic oxidizers, we are proposing to add the control devices and operating limits listed in Table 1 to subpart IIII of Part 63—

Operating Limits for Capture Systems and Add-On Control Devices (ALDT NESHAP Table 1) to the revised NSPS MMa. The additional control devices include regenerative carbon adsorbers, condensers, and concentrators (including zeolite wheels and rotary carbon adsorbers). We are also proposing the addition of requirements for capture systems that are permanent total enclosures and that are not permanent total enclosures to the revised NSPS MMa to match the ALDT NESHAP requirements.

#### Operating Limits and Monitoring Provisions

The ADLT NSPS subpart MM requires affected sources using control devices to meet the VOC limits to install, calibrate, maintain, and operate temperature measurement devices. It also specifies the accuracy of the temperature and requires each temperature measurement device be equipped with a recording device so that a permanent record is produced. We are proposing to revise the provisions for establishing the operating limits for the existing control devices and to add these provisions for new control devices in the revised NSPS subpart MMa to match the ALDT NESHAP requirements at (a) §63.3093 and NESHAP Subpart IIII Table 1, (b) the provisions for establishing control device operating limits in §63.3167, and (c) the provisions for the continuous monitoring system installation, operation and maintenance of control devices in §63.3168. Facilities demonstrating compliance with these ALDT NESHAP subpart IIII requirements will be in compliance with these same requirements in the revised NSPS subpart MMa.

#### Performance Testing

The ADLT NSPS requires an initial performance test to be conducted in accordance with §60.8(a) and thereafter for each calendar month for each prime coat, guide coat, and topcoat operation to demonstrate compliance with the ALDT NSPS subpart MM. Each monthly calculation is considered to be a performance test to demonstrate compliance with the ALDT NSPS emission limits. The ALDT NSPS also requires the reporting of additional data for the initial performance test or in subsequent performance tests at which destruction efficiency is

determined. The ALDT NSPS does not, however, require subsequent performance tests in addition to the initial performance test to determine destruction efficiency. We are proposing to add the periodic testing provisions for control devices to determine destruction efficiency once every five years to match the ALDT NESHAP requirements. Periodic performance tests are used to establish or evaluate the ongoing destruction efficiency of the control device and establish the corresponding operating parameters, such as temperature, which can vary as processes change or as control devices age. We are proposing to align the revised NSPS subpart MMA performance testing requirements with requirements that match the provisions for initial performance testing under the ALDT NESHAP subpart IIII in §63.3160 and periodic performance testing in §63.3160(c)(3) to apply to the control devices used for compliance with the emission limits in the revised subpart MMA. We are also proposing to add the control device efficiency requirements to the revised NSPS subpart MMA to match the ALDT NESHAP requirements at section §63.3166. ALDT facilities demonstrating compliance with these ALDT NESHAP subpart IIII requirements will be in compliance with these same requirements in the revised NSPS subpart MMA.

#### Transfer Efficiency

The NSPS subpart MM provides default transfer efficiency (TE) values representing the overall transfer system efficiency according to the method of coating application and the capture and collection of purge solvent used during color changes. We are proposing to revise these requirements in revised subpart MMA to provide a more accurate measure of transfer efficiency and to make these requirements consistent with the ALDT NESHAP subpart IIII requirements. We are proposing that sources determine the transfer efficiency for each guide coat and topcoat coating using ASTM D5066-91 (Reapproved 2017) or the guidelines presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-453/R-08-002, September 2008. We are also proposing the requirements for transfer efficiency testing on representative coatings and for representative



spray booths as described in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-453/R-08-002, September 2008. We are also proposing that sources can assume 100-percent transfer efficiency for prime coat EDP operations. ALDT facilities demonstrating compliance with these ALDT NESHAP subpart IIII requirements will be in compliance with these same requirements in the revised NSPS subpart MMa.

#### Reference Methods and Procedures

The ALDT NSPS subpart MM lists EPA methods used in compliance calculations as EPA Methods 1, 2, 3, 4, 24, and 25 of 40 CFR part 60, appendix A and “any equivalent or alternative methods.” In order to meet the new testing, monitoring, and reporting provisions described above, additional the EPA reference methods and alternative methods (for IBR) are proposed for the revised NSPS MMa to be consistent with the ALDT NESHAP compliance calculations. In addition to these EPA methods and alternative methods we are proposing to add other methods specific to automotive coatings and the panel testing procedure in *Appendix A to Subpart IIII of Part 63—Determination of Capture Efficiency of Automobile and Light-Duty Truck Spray Booth Emissions From Solvent-borne Coatings Using Panel Testing* to the ALDT NSPS. The complete list of EPA methods is listed in section VIII. I. of this preamble and the VCS we propose to IBR are listed in Section VII of this preamble.

*B. What other actions are we proposing, and what is the rationale for those actions?*

*a. Proposal of NSPS Subpart MMa Without Startup, Shutdown, Malfunction Exemptions*

In its 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) vacated portions of two provisions in the EPA’s CAA section 112 regulations governing the emissions of HAP during periods of SSM. Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must be continuous in nature and that the SSM exemption violates the

CAA's requirement that some section 112 standards apply continuously. Consistent with *Sierra Club v. EPA*, we are proposing standards in this rule that apply at all times. The NSPS general provisions in 40 CFR 60.8(c) currently exempt non-opacity emission standards during periods of startup, shutdown, and malfunction. We are proposing in subpart MMA in section 40 CFR 60.392a specific requirements that override the general provisions for SSM. We are also proposing that the standards in subpart MMA apply at all times, and more specifically during periods of SSM, to match the SSM provisions in the ALDT NESHAP 40 CFR 63 subpart IIII.

The EPA has attempted to ensure that the general provisions we are proposing to override are inappropriate, unnecessary, or redundant in the absence of the SSM exemption. We specifically seek comment on whether we have successfully done so.

In proposing the standards in this rule, the EPA has taken into account startup and shutdown periods and, for the reasons explained below, has not proposed alternate standards for those periods. We discussed the need for alternative standards with industry representatives during the recent development of amendments to ALDT NESHAP 40 CFR 63 subpart IIII and no issues were identified and there are no data indicating problems during periods of startup and shutdown. The primary control devices used to control VOC emissions for the ALDT surface coating operations are carbon adsorbers, concentrators and thermal oxidizers, which are effective control devices for controlling emissions during startup and shutdown events. With regard to malfunctions, these events are described in the following paragraph.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. Malfunctions, in contrast, are neither predictable nor routine. Instead, they are, by definition, sudden, infrequent, and not reasonably preventable failures of emissions control, process, or monitoring equipment. (40 CFR 60.2). The EPA interprets CAA section 111 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 111 standards. Nothing in CAA section 111 or in case law requires that the EPA consider malfunctions when determining what standards of performance

reflect the degree of emission limitation achievable through “the application of the best system of emission reduction” that the EPA determines is adequately demonstrated. While the EPA accounts for variability in setting emissions standards, nothing in section 111 requires the Agency to consider malfunctions as part of that analysis. The EPA is not required to treat a malfunction in the same manner as the type of variation in performance that occurs during routine operations of a source. A malfunction is a failure of the source to perform in a “normal or usual manner” and no statutory language compels the EPA to consider such events in setting section 111 standards of performance. The EPA’s approach to malfunctions in the analogous circumstances (setting “achievable” standards under section 112) has been upheld as reasonable by the D.C Circuit in *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 606-610 (D.C. Cir. 2016).

*b. Electronic Reporting*

The EPA is proposing that owners and operators of ALDT surface coating operations subject to the current and new NSPS at 40 CFR part 60, subparts MM and MMA submit electronic copies of required performance test reports and the excess emissions and continuous monitoring system performance and summary reports, through the EPA’s Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI). A description of the electronic data submission process is provided in the memorandum *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in the docket for this action. The proposed rule requires that performance test results collected using test methods that are supported by the EPA’s Electronic Reporting Tool (ERT) as listed on the ERT website<sup>3</sup> at the time of the test be submitted in the format generated through the use of the ERT or an electronic file consistent with the xml schema on the ERT website, and other performance test results be submitted in portable document format (PDF) using the WebFIRE Template and Test Quality Rating Tool, also available at the ERT website or an electronic file consistent with the xml

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<sup>3</sup><https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>

schema on the ERT website. In addition, an electronic copy (PDF) copy of the entire report documenting the source test must be attached to the ERT. For the excess emissions and continuous monitoring system performance and summary reports, the proposed rules require that owners and operators use the appropriate spreadsheet template to submit information to CEDRI once the spreadsheet template is uploaded and forms for the reports have been available in CEDRI for 90 days. A draft version of the templates for the semiannual reports is under development, and we are working to complete them by proposal. Revisions to the template may be needed to reflect revisions to the proposed NSPS subpart MMa rule text in response to public comments. A draft version of the revised template will be included in the final rule docket for this action.<sup>4</sup> Similar to the template development efforts for the ALDT NESHAP 40 CFR 63 subpart IIII, the EPA will consider clarifying the draft template, as needed. The EPA specifically requests comments on the content, layout, and overall design of the template(s).

Additionally, the EPA has identified two broad circumstances in which electronic reporting extensions may be provided. These circumstances are (1) outages of the EPA's CDX or CEDRI which preclude an owner or operator from accessing the system and submitting required reports and (2) *force majeure* events, which are defined as events that will be or have been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevent an owner or operator from complying with the requirement to submit a report electronically. Examples of *force majeure* events are acts of nature, acts of war or terrorism, or equipment failure or safety hazards beyond the control of the facility. The EPA is providing these potential extensions to enable owners and operators to remain in compliance in cases where they cannot successfully submit a report by the reporting deadline for reasons outside of their control. In both circumstances, the decision to accept the

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<sup>4</sup>See the EPA form number 5900-581, *ALDT\_Surface\_Coating\_Subpart\_MM\_Excess\_Emissions\_CMS\_Performance\_Report\_Template.xlsx*, and EPA form number 5900-582, *ALDT\_Surface\_Coating\_Subpart MMa\_Excess\_Emissions\_CMS\_Performance\_Report\_Template.xlsx*, available in Docket ID No. EPA-HQ-OAR-2021-0664.

claim of needing additional time to report is within the discretion of the Administrator, and reporting should occur as soon as possible.

The electronic submittal of the reports addressed in this proposed rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends in data availability and transparency, will further assist in the protection of public health and the environment, will improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with requirements and by facilitating the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance, and will ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA. Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public. Moreover, electronic reporting is consistent with the EPA's plan<sup>5</sup> to implement Executive Order 13563 and is in keeping with the EPA's Agency-wide policy<sup>6</sup> developed in response to the White House's Digital Government Strategy.<sup>7</sup> For more information on the benefits of electronic reporting, see the memorandum *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, referenced earlier in this section.

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<sup>5</sup>EPA's Final Plan for Periodic Retrospective Reviews, August 2011. Available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2011-0156-0154>.

<sup>6</sup>E-Reporting Policy Statement for EPA Regulations, September 2013. Available at: <https://www.epa.gov/sites/production/files/2016-03/documents/epa-ereporting-policy-statement-2013-09-30.pdf>.

<sup>7</sup>Digital Government: Building a 21<sup>st</sup> Century Platform to Better Serve the American People, May 2012. Available at: <https://obamawhitehouse.archives.gov/sites/default/files/omb/egov/digital-government/digital-government.html>.

*c. What compliance dates are we proposing, and what is the rationale for the proposed compliance dates?*

The effective date of the final rule will be the promulgation date, as specified in CAA section 111(b)(1)(B)). Affected sources that commence construction, reconstruction, or modification after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, must comply with all requirements of 40 CFR part 60 subpart MMa, no later than the effective date of the final rule or upon startup, whichever is later.

Affected facilities for which construction, modification, or reconstruction began on or before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** must comply with all requirements of 40 CFR part 60 subpart MM no later than the effective date of the final rule or upon startup, whichever is later.

## **V. Summary of Cost, Environmental, Energy, and Economic Impacts**

### *A. What are the air quality impacts?*

The new NSPS subpart MMa, would achieve an estimated average of 331 tpy reduction of allowable VOC emissions per facility compared to that of the current NSPS subpart MM. Over the first 8 years after the rule is final, we expect an average of two new, reconstructed, or modified facilities per year, or sixteen new affected facilities. We estimate a total VOC emission reduction of 4,160 tpy in the eighth year after the rule is final, compared to the current NSPS subpart MM.

We estimate an average GHG emissions production of 4,474 mtCO<sub>2</sub>e per year per facility. Over the first 8 years after the rule is final, we expect an average of two new, reconstructed, or modified facilities per year, or sixteen new affected facilities. We estimate a total GHG emission production of 71,584 mtCO<sub>2</sub>e in the eighth year after the rule is final.

We did not evaluate the environmental impacts of other pollutants such as hydrocarbons (other than VOC), NO<sub>x</sub>, and CO emitted by control devices due to the combustion of natural gas as fuel or from the generation of electricity.

*B. What are the energy impacts?*

The energy impacts associated with the electricity and natural gas consumption associated with the operation of control devices to meet proposed NSPS subpart MMa include an estimated average electricity consumption of 2.54 million kwh per year per facility and an estimated average natural gas consumption of 48.8 million scf per year per facility compared to that of the current NSPS subpart MM. Over the first 8 years after the rule is final, we expect an average of two new, reconstructed, or modified facilities per year, or sixteen new affected facilities. We estimate a total electricity consumption of 40.6 million kwh and a total natural gas consumption of 780.8 million scf in the eighth year after the rule is final, compared to the current NSPS subpart MM.

*C. What are the cost impacts?*

We estimate that the annual capital cost of controls to comply with the NSPS subpart MMa will be \$6.3 million per year per new facility, or \$12.6 million per year for two new facilities in each year in the 8-year period after the rule is final.

We estimate that the average annual cost of controls to comply with the NSPS subpart MMa will be \$1.71 million per year per facility, or \$3.42 million for two new facilities in each year in the 8-year period after the rule is final. The total cumulative annual costs (including annualized capital costs and O&M costs) of complying with the rule in the eighth year after the rule is final would be \$27.34 million.

We estimate that the average cost of the periodic testing of control devices once every 5 years to comply with the NSPS MMa will be \$57,000 per facility, or \$114,000 for two facilities in the fifth year after the rule is final.

*D. What are the economic impacts?*

The EPA conducted an economic impact analysis and small business screening assessment for this proposal, as detailed in the memorandum, *Economic Impact Analysis and Small Business Screening Assessment for Proposed Revisions and Amendments to the New*

*Source Performance Standards for Automobile and Light Duty Truck Surface Coating*

*Operations*, which is available in the docket for this action. The economic impacts of the proposal are estimated by comparing total annualized compliance costs to revenues at the ultimate parent company level. This is known as the cost-to-revenue or cost-to-sales test. This ratio provides a measure of the direct economic impact to ultimate parent owners of facilities while presuming no impact on consumers. We estimate that none of the ultimate parent owners potentially affected by this proposal will incur total annualized costs of greater than one percent of their revenues if they modify or reconstruct the relevant portions of their facility and become subject to the requirements of this proposed rule.

While one existing facility is currently owned by a small entity, that facility is in the process of being sold to a company that is not a small entity. Furthermore, that facility is already in compliance with the requirements in this proposed rule, so even if it were to modify or reconstruct and become subject to the proposed subpart MMA, it is not anticipated that it would incur any additional costs as a result. Because the coatings processes are large operations at automobile and light duty truck manufacturing facilities, it is not anticipated that any affected facilities that have exited their initial startup phase would be classified as small entities. Therefore, no economic impacts are expected for small entities. Furthermore, it is assumed that any new entrant into the industry would have sales similar to at least the smallest current ultimate owner, so it is not anticipated that any new ultimate owner would face costs of greater than one percent of sales.

Therefore, the economic impacts are anticipated to be low for affected companies and the industries impacted by this proposal, and there will not be substantial impacts on the markets for affected products. The costs of the proposal are not expected to result in a significant market impact, regardless of whether they are passed on to the purchaser or absorbed by the firms.



*E. What are the benefits?*

As described above, the proposed NSPS subpart MMa would result in lower VOC emissions compared to the existing NSPS subpart MM. The new NSPS subpart MMa would also require that the standards apply at all times, which includes SSM periods. We are also proposing several compliance assurance requirements which will ensure compliance with the new NSPS subpart MMa and help prevent noncompliant emissions of VOC. Furthermore, the proposed requirements in the new NSPS subpart MMa to submit reports and test results electronically will improve monitoring, compliance, and implementation of the rule.

Reducing emissions of VOC is expected to help reduce ambient concentrations of ground level ozone and increase compliance with the National Ambient Air Quality Standards (NAAQS) for ozone. A quantitative analysis of the impacts on the NAAQS in the areas located near ALDT plants would be technically complicated, resource intensive and infeasible to perform in the time available and would not represent the impacts for future new ALDT sources because the locations of new sources are currently unknown. For these reasons, we did not perform a quantitative analysis. However, currently available health effects evidence supporting the December 23, 2020, final decision for the ozone NAAQS continues to support the conclusion that ozone can cause difficulty breathing and other respiratory system effects. For people with asthma, these effects can lead to emergency room visits and hospital admissions. Exposure over the long term may lead to the development of asthma. People most at risk from breathing air containing ozone include people with asthma, children, the elderly, and outdoor workers. For children, ozone in outdoor air increases their risk of asthma attacks while playing, exercising, or engaging in strenuous work activities outdoors.

*F. What analysis of environmental justice did we conduct?*

Consistent with the EPA's commitment to integrating environmental justice in the Agency's actions, and following the directives set forth in multiple Executive Orders as well as CAA section 111(b)(1)(B), the Agency has carefully considered the impacts of this action on

communities with environmental justice concerns. This action proposes standards of performance for new, modified, and reconstructed sources that commence construction after the rule is proposed. Therefore, the locations of the new, modified, and reconstructed sources at ALDT surface coating facilities are not known. In addition, it is not known which of the existing ALDT surface coating facilities will modify or reconstruct the affected sources in the future. Therefore, the demographic analysis was conducted for 46 existing facilities (45 operating and one is due to start construction in May 2022) to characterize the demographics in areas where the facilities are currently located. The demographic analysis shows that the percent minority population in close proximity to these facilities is higher than the national average (49 percent versus 40 percent). Within minorities, the percent of the population that is African American is significantly higher than the national average (27 percent versus 12 percent). All other minority demographics are similar to or below the corresponding national averages. The percent of people living below the poverty level is significantly higher than the national average (22 percent versus 13 percent). The percent of people over 25 without a high school diploma is also higher than the national average (15 percent versus 12 percent). The percentage of the population living in linguistic isolation is similar to the national average (6 percent versus 5 percent). The EPA particularly noted community impacts and concerns in some areas of the country that have a larger percentage of sources. A large percentage of the sources in the Auto and Light Duty Truck Surface Coating source category are located in EPA Region 5 states and of those states, most sources are located in the state of Michigan. Most, if not all the counties where these sources are located are designated as ozone non-attainment areas. For this reason, we engaged with EPA Region 5 and the state of Michigan as part of this rulemaking.

The EPA expects that this ALDT NSPS review will result in significant reductions of VOC emissions from the affected sources. The new emission limits proposed for this action reflects the best system of emission reduction demonstrated and establishes a new more stringent standard of performance for the primary sources of VOC emissions from the source category.

The EPA expects the proposed requirements in subpart MMA will result in significant reductions of VOC emissions for communities surrounding new, modified and reconstructed affected sources compared to the existing rule in subpart MM and will result in less VOC emissions for communities located in areas designated as ozone non-attainment areas. These areas are already overburdened by pollution, and are often minority, low-income and indigenous communities. Following is a more detailed description of how the Agency considers environmental justice (EJ) in the context of regulatory development, and specific actions taken to address EJ concerns for this action.

Executive Order 12898 directs the EPA to identify the populations of concern who are most likely to experience unequal burdens from environmental harms; specifically, minority populations, low-income populations, and indigenous peoples (59 FR 7629, February 16, 1994). Additionally, Executive Order 13985 is intended to advance racial equity and support underserved communities through Federal government actions (86 FR 7009, January 20, 2021). The EPA defines EJ as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies<sup>8</sup>”. The EPA further defines the term fair treatment to mean that “no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.” In recognizing that minority and low-income populations often bear an unequal burden of environmental harms and risks, the EPA continues to consider ways of protecting them from adverse public health and environmental effects of air pollution.

When practicable, the EPA begins its environmental justice analysis by first identifying stakeholders who may be disproportionately impacted by the pending regulatory action. An assessment of populations in close proximity to sources helps the EPA in considering outreach

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<sup>8</sup><https://www.epa.gov/environmentaljustice>

and engagement strategies. For this action, we performed a demographic analysis, which is an assessment of individual demographic groups of the populations living within 5 kilometers (km) and within 50 km of the facilities. The EPA then compared the data from this analysis to the national average for each of the demographic groups.

As stated above, this action proposes standards of performance for new, modified, and reconstructed sources that commence construction after the rule is proposed. Therefore, the locations of the construction of new Auto and Light Duty Truck Surface Coating affected sources are not known. In addition, it is not known which of the existing Auto and Light Duty Truck Surface Coating affected sources will be modified or reconstructed in the future. Therefore, the demographic analysis was conducted for all 46 existing facilities as a characterization of the demographics in areas where these facilities are now located.

The results of the demographic analysis (Table 1) indicate that, for populations within 5 km of the 46 facilities in the source category, the percent minority population (being the total population minus the white population) is higher than the national average (49 percent versus 40 percent). Within minorities, the percent of the population that is African American is significantly higher than the national average (27 percent versus 12 percent). All other minority demographics are at or below the corresponding national averages. The percent of people living below the poverty level is significantly higher than the national average (22 percent versus 13 percent). The percent of people over 25 without a high school diploma is also higher than the national average (15 percent versus 12 percent). The percentage of the population living in linguistic isolation is similar to the national average (6 percent versus 5 percent).

At a 50 km radius of sources, the results of the demographic analysis (Table 1) indicate that the percent minority population is similar to the national average (41 percent versus 40 percent). Within minorities, the percent African American (17 percent) and the percent Other/Multiracial (9 percent) populations are higher than the national averages (12 percent and 8 percent, respectively). All other minority demographics are below the corresponding national

averages. The percent of people living below the poverty level, the percent of people over 25 without a high school diploma, and the percent living in linguistic isolation are similar to or below the national average.

A summary of the demographic assessment performed for facilities affected by the NSPS for ALDT surface coating operations is included as Table 1. The methodology and the results of the demographic analysis are presented in a technical report titled, *Analysis of Demographic Factors for Populations Living Near Automobile and Light-Duty Truck Surface Coating NSPS Source Category Operations*, available in the docket for this action (Docket ID No. EPA-HQ-OAR-2021-0664).

**Table 1. Demographic Assessment Results for the Automobile and Light-Duty Truck Surface Coating NSPS Source Category Operations\*\*\*\***

<b>Demographic Group</b>	<b>Nationwide*</b>	<b>Population within 50 km of 46 Existing Facilities</b>	<b>Population within 5 km of 46 Existing Facilities</b>
Total Population	328,016,242	42,618,391	1,696,179
	<b>White and Minority by Percent</b>		
White	60%	59%	51%
Minority**	40%	41%	49%
	<b>Minority by Percent</b>		
African American	12%	17%	27%
Native American	0.7%	0.2%	0.2%
Hispanic or Latino*** (includes white and nonwhite)	19%	15%	13%
Other and Multiracial	8%	9%	9%
	<b>Income by Percent</b>		
Below Poverty Level	13%	13%	22%
Above Poverty Level	87%	87%	78%
	<b>Education by Percent</b>		
Over 25 and without a High School Diploma	12%	12%	15%
Over 25 and with a High School Diploma	88%	88%	85%
	<b>Linguistically Isolated by Percent</b>		
Linguistically Isolated	5%	4%	6%

\*The nationwide population count and all demographic percentages are based on the Census' 2015-2019 American Community Survey five-year block group averages and include Puerto Rico. Demographic percentages based on different averages may differ. The total population counts within 5 km and 50 km of all facilities are based on the 2010 Decennial Census block populations.

\*\*Minority population is the total population minus the white population.

\*\*\*To avoid double counting, the "Hispanic or Latino" category is treated as a distinct demographic category for these analyses. A person is identified as one of five racial/ethnic categories above: White, African American, Native American, Other and Multiracial, or Hispanic/Latino. A person who identifies as Hispanic or Latino is counted as Hispanic/Latino for this analysis, regardless of what race this person may have also identified as in the Census.

\*\*\*\*This action proposes standards of performance for new, modified, and reconstructed sources that commence construction after the rule is proposed. Therefore, the locations of the construction of new Auto and Light Duty Truck Surface Coating facilities are not known. In addition, it is not known which of the existing Auto and Light Duty Truck Surface Coating facilities will be modified or reconstructed in the future. Therefore, the demographic analysis was conducted for the 46 existing facilities as a characterization of the demographics in areas where these facilities are now located.

The EPA expects that this action will result in significant reductions of VOC emissions from the affected sources for all communities, including communities potentially overburdened by pollution, which are often minority, low-income and indigenous. The proposed new NSPS will have beneficial effects on air quality and public health both locally and regionally. Further, this rulemaking complements other actions already taken by the EPA to reduce emissions and improve health outcomes for overburdened and underserved communities.

## **VI. Request for Comments**

We solicit comments on all aspects of this proposed action, especially the proposed emission limits, the cost-effectiveness estimates, and other impacts. We also encourage commenters to include data to support their comments. We invite comments on the benefits summary and welcome any data on these or other impacts associated with VOCs from ALDT sources. We are also interested in comments and information related to the practices, processes, and control technologies to reduce VOC emissions from surface coating operations at ALDT facilities.

## **VII. Incorporation by Reference**

The EPA proposes to amend the 40 CFR 60.17 to incorporate by reference the following VCS:

- ANSI/ASME, PTC 19.10-1981, “Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]” is a manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas and is proposed as an alternative to EPA Method 3B manual portion only and not the instrumental portion.
- ASTM D6420-18, “Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry” is a test method that can be used to determine the mass concentration of VOC and is proposed as an alternative to EPA Method 18 only when the target compounds are all known, and the target compounds are all listed in ASTM D6420-18 as measurable. This method should not be used for methane and ethane (because atomic mass is less than 35) and it should never be specified as a total VOC method.
- ASTM Method D6093-97 (Reapproved 2016) “Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer” is a test method that can be used to determine the percent volume of nonvolatile matter in clear and pigmented coatings and is proposed as an alternative to EPA Method 24.
- ASTM D2369-10 (Reapproved 2015)e1, “Test Method for Volatile Content of Coatings” is a test method that allows for more accurate results for multi-component chemical resistant coatings and is proposed as an alternative to EPA Method 24.
- ASTM Method D2697-03 (Reapproved 2014), “Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings” is a test method that can be used to determine the volume of nonvolatile matter in clear and pigmented coatings and is proposed as an alternative to EPA Method 24.
- The “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-453/R-08-002, September

2008, are procedures for combining analytical VOC content and formulation solvent content and are proposed as an alternative to EPA Method 24.

- ASTM D1475-13 “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” is a test method that can be used to determine the density of coatings and the updated version of the test method clarifies units of measure and reduces the number of determinations required.
- ASTM D5965-02 (Reapproved 2013) test method A or test method B “Standard Test Methods for Specific Gravity of Coating Powders” are test methods that can be used to determine the specific gravity of powder coatings.
- ASTM D5066-91 (Reapproved 2017) “Standard Test Method for Determination of the Transfer Efficiency Under Production Conditions for Spray Application of Automotive Paints-Weight Basis” is a procedure to measure the transfer efficiency of spray coatings.
- ASTM D5087-02 “Standard Test Method for Determining Amount of Volatile Organic Compound (VOC) Released from Solventborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement)” is a procedure to measure solvent loading for the heated flash zones and bake ovens for waterborne coatings.
- ASTM D6266-00a (Reapproved 2017) “Test Method for Determining the Amount of Volatile Organic Compound (VOC) Released from Waterborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement)” is also a procedure to measure solvent loading for heated flash zones and bake ovens for waterborne coatings.

ASTM D5066-91 (Reapproved 2017) is cited in the proposed rule as an acceptable procedure to measure the transfer efficiency of spray coatings. ASTM D5087-02 and ASTM D6266-00a (Reapproved 2017) are cited in the proposed rule as acceptable procedures to measure solvent loading (similar to capture efficiency) for the heated flash zone for waterborne basecoats and for bake ovens. Currently, no EPA methods are available to measure transfer



efficiency or solvent release potential from automobile and light-duty truck coatings in order to determine the potential solvent loading from the coatings used.

We also identified VCS ASTM D2111-10 (2015), “Standard Test Methods for Specific Gravity of Halogenated Organic Solvents and Their Admixtures” as an acceptable alternative to EPA Method 24. This ASTM standard can be used to determine the density for the specific coatings (halogenated organic solvents) cited using Method B (pycnometer) only (as in ASTM 1217). We are not proposing this VCS because ALDT surface coating operations do not use halogenated organic solvents, based on our knowledge of the industry.

EPA-453/R-08-002 is available online at <https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-guidelines-and-standards-solvent-use-and-surface> (see Automobile and Light Duty Truck CTG) or through [www.regulations.gov](http://www.regulations.gov) under EPA-HQ-OAR-2008-0413-0080.

ANSI/ASME, PTC 19.10-1981 is available from the American Society of Mechanical Engineers (ASME), Two Park Avenue, New York, NY 10016-5990, Telephone (800) 843-2763. See [www.asme.org](http://www.asme.org)

The ASTM standards are available from the American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428–2959. See [www.astm.org](http://www.astm.org).

## **VIII. Statutory and Executive Order Reviews**

Additional information about these statutes and Executive Orders can be found at <https://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

### *A. Executive Order 12866: Regulatory Planning and Review*

Although this action is not economically significant, it was submitted to the Office of Management and Budget (OMB) for review. An economic impact analysis (EIA) was prepared for this action and is available in the docket. Any changes made in response to OMB recommendations have also been documented in the docket.

## *B. Paperwork Reduction Act (PRA)*

The information collection activities in this action have been submitted for approval to OMB under the PRA.

The Information Collection Request (ICR) document for MM has been assigned EPA ICR number 1064.20 and the ICR document for MMA has been assigned EPA ICR number 2714.01. You can find a copy of both ICR in the ALDT NSPS Docket No. EPA-HQ-OAR-2021-0664, and they are briefly summarized here. Each ICR is specific to information collection associated with the ALDT surface coating source category, either through the revised 40 CFR part 60, subpart MM or through the new 40 CFR part 60, subpart MMA.

For the revised 40 CFR part 60, subpart MM, as part of the ALDT NSPS review, the EPA is proposing to include the requirement for electronic submittal of reports.

*Respondents/affected entities:* The respondents to the recordkeeping and reporting requirements are owners or operators of ALDT surface coating operations subject to 40 CFR part 60, subpart MM.

*Respondent's obligation to respond:* Mandatory (40 CFR part 60, subpart MM).

*Estimated number of respondents:* In the 3 years after the amendments are final, approximately 44 respondents per year will be subject to the NSPS and no new respondents will be subject to the NSPS (40 CFR part 60, subpart MM).

*Frequency of response:* The frequency of responses varies depending on the burden item. Responses include onetime review of rule requirements, reports of performance tests, and semiannual excess emissions and continuous monitoring system performance reports.

*Total estimated burden:* The average annual recordkeeping and reporting burden for the 44 responding facilities to comply with all of the requirements in the new NSPS subpart MMA over the 3 years after the rule is final is estimated to be 506 hours (per year). The average annual burden to the Agency over the 3 years after the rule is final is estimated to be 152 hours (per year). Burden is defined at 5 CFR 1320.3(b).

*Total estimated cost:* The average annual cost to the ALDT facilities is \$46,000 in labor costs in the first 3 years after the rule is final. The total average annual Agency cost over the first 3 years after the amendments are final is estimated to be \$7,800.

For the new 40 CFR part 60, subpart MMA, as part of the ALDT NSPS review, the EPA is proposing to revise the emission limit requirements and is adding new work practices for new, modified and reconstructed sources. We are proposing changes to the testing, recordkeeping and reporting requirements associated with 40 CFR part 60, subpart MMA, in the form of requiring performance tests every 5 years and including the requirement for electronic submittal of reports. This information is being collected to assure compliance with 40 CFR part 60, subpart MMA.

*Respondents/affected entities:* The respondents to the recordkeeping and reporting requirements are owners or operators of ALDT surface coating operations subject to 40 CFR part 60, subpart MMA.

*Respondent's obligation to respond:* Mandatory (40 CFR part 60, subpart MMA).

*Estimated number of respondents:* In the 3 years after the amendments are final, approximately 6 respondents per year will be subject to the NSPS (40 CFR part 60, subpart MMA).

*Frequency of response:* The frequency of responses varies depending on the burden item. Responses include onetime review of rule requirements, reports of performance tests, and semiannual excess emissions and continuous monitoring system performance reports.

*Total estimated burden:* The average annual recordkeeping and reporting burden for the 6 responding facilities to comply with all of the requirements in the new NSPS subpart MMA over the 3 years after the rule is final is estimated to be 1,663 hours (per year). The average annual burden to the Agency over the 3 years after the rule is final is estimated to be 207 hours (per year). Burden is defined at 5 CFR 1320.3(b).

*Total estimated cost:* The average annual cost to the ALDT facilities is \$151,600 in labor costs in the first 3 years after the rule is final. The average annual capital and operation and

maintenance (O&M) cost is \$151,000 in the first 3 years after the rule is final. The total average annual cost is \$302,600 in the first 3 years after the rule is final. The total average annual Agency cost over the first 3 years after the amendments are final is estimated to be \$10,600.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to [OIRA\\_submission@omb.eop.gov](mailto:OIRA_submission@omb.eop.gov), Attention: Desk Officer for the EPA. Because OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The EPA will respond to any ICR-related comments in the final rule.

#### *C. Regulatory Flexibility Act (RFA)*

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. Details of this analysis are presented in the *Economic Impact and Small Business Analysis for the Automobile and Light Duty Truck Surface Coating NSPS Review*, which is available in the docket for this action. The annualized costs associated with the requirements in this action for the affected small entities is described in section IV.C. above.

#### *D. Unfunded Mandates Reform Act of 1995 (UMRA)*

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments.

While this action creates an enforceable duty on the private sector, the cost does not exceed \$100 million or more.

*E. Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

*F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*

This action does not have tribal implications as specified in Executive Order 13175. It will neither impose substantial direct compliance costs on Federally recognized Tribal governments, nor preempt Tribal law, and does not have substantial direct effects on the relationship between the Federal Government and Indian Tribes or on the distribution of power and responsibilities between the Federal Government and Indian Tribes, as specified in E.O. 13175 (65 FR 67249, November 9, 2000). No tribal facilities are known to be engaged in the industry that would be affected by this action nor are there any adverse health or environmental effects from this action. However, the EPA conducted a proximity analysis for this source category and found that six auto and light duty truck assembly plants are located within 50 miles of Tribal lands. Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA will offer consultation with Tribal officials during the development of this action.

*G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

*H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy*

### *Supply, Distribution, or Use*

This action is not a “significant regulatory action” because it is not likely to have a significant adverse effect on the supply, distribution or use of energy.

#### *I. National Technology Transfer and Advancement 51 Act (NTTAA) and 1 CFR part 51*

This rulemaking involves technical standards. Therefore, the EPA conducted searches through the Enhanced NSSN Database managed by the American National Standards Institute (ANSI) to determine if there are voluntary consensus standards (VCS) that are relevant to this action. The Agency also contacted VCS organizations and accessed and searched their databases. Searches were conducted for the EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 18, 24, 25, and 25A of appendix A to 40 CFR part 60; EPA Methods 204, 204A, 204B, 204C, 204D, 204E, and 204F of appendix M to 40 CFR part 51; and EPA Method 311 of appendix A to 40 CFR part 63. As a result of this search, no applicable voluntary consensus standards were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 204, 204A, 204B, 204C, 204D, 204E and 204F.

During the search, if the title or abstract (if provided) of the VCS described technical sampling and analytical procedures that are similar to the EPA’s reference method, the EPA considered it as a potential equivalent method. All potential standards were reviewed to determine the practicality of the VCS for this rule. This review requires significant method validation data which meets the requirements of the EPA Method 301 for accepting alternative methods or scientific, engineering and policy equivalence to procedures in the EPA reference methods. The EPA may reconsider determinations of impracticality when additional information is available for particular VCS. As a result, the EPA proposes to amend 40 CFR 60.17 to incorporate by reference (IBR) the following VCS:

- ANSI/ASME, PTC 19.10-1981, “Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]” as an alternative to EPA Method 3B manual portion only and not the instrumental portion.

- ASTM D6420-18, “Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry” as an alternative to EPA Method 18 only when the target compounds are all known, and the target compounds are all listed in ASTM D6420-18 as measurable. This method should not be used for methane and ethane (because atomic mass is less than 35) and it should never be specified as a total VOC method.
- ASTM Method D6093-97 (Reapproved 2016) “Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer” as an alternative to EPA Method 24.
- ASTM D2369-10 (Reapproved 2015) e1, “Test Method for Volatile Content of Coatings” as an alternative to EPA Method 24.
- ASTM Method D2697-03 (Reapproved 2014), “Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings” as an alternative to EPA Method 24.
- Guidelines for combining analytical VOC content and formulation solvent content presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-453/R-08-002, September 2008, as an alternative to EPA Method 24.

In addition to the VCS identified for EPA reference methods, we propose to amend 40 CFR 60.17 to IBR the following ASTM methods for ALDT coatings:

- ASTM D1475-13 “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products.”
- ASTM D5965-02 (Reapproved 2013) test method A or test method B “Standard Test Methods for Specific Gravity of Coating Powders.”
- ASTM D5066-91 (Reapproved 2017) “Standard Test Method for Determination of the Transfer Efficiency Under Production Conditions for Spray Application of Automotive Paints-Weight Basis.”

- ASTM D5087-02 “Standard Test Method for Determining Amount of Volatile Organic Compound (VOC) Released from Solventborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement).”
- ASTM D6266-00a (Reapproved 2017) “Test Method for Determining the Amount of Volatile Organic Compound (VOC) Released from Waterborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement).”

Additional information for the VCS search and determinations can be found in the memorandum, *Voluntary Consensus Standard Results for Review of Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations*, which is available in the docket for this action.

Under 40 CFR 60.8(b) and 60.13(i) of subpart A of the General Provisions, a source may apply to the EPA to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications or procedures in the final rule or any amendments. The EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially applicable VCS and to explain why such standards should be used in this regulation.

*J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

This action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The documentation for this decision is contained in section V.C and V.E of this preamble. As discussed in section V.E of this preamble, we performed a demographic analysis for the automobile and light duty truck surface coating source category, which is an assessment of the proximity of individual demographic groups living close to the facilities (within 50 km and within 5 km). Results of the demographic analysis indicate that the following groups above



the national average: African Americans, People Living Below the Poverty Level, and People without a High School Diploma.

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Michael S. Regan,

*Administrator.*

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